

## **1.0 INTRODUCTION**

Williams Production RMT Company (Williams) of Denver, Colorado (formerly Barrett Resources Corporation), proposes an exploration coalbed methane (CBM) project located in Townships 23 and 24 North, Ranges 80 and 81 West, Carbon County, Wyoming (Figure 1.1). The Hanna Draw Exploration Project Area (HDEPA) analyzed in this environmental assessment (EA) encompasses approximately 18,151 acres (in the combined exploration drilling area and pipeline corridor), 6,735 acres (37%) of which are federal surface and mineral estate administered by the U.S. Bureau of Land Management (BLM), Rawlins Field Office. The exploration area outlined on Figure 1.1 lies within the Hanna Draw Federal Unit, a BLM-designated leasing unit currently leased by Williams. Only the exploration area and a proposed interconnect pipeline corridor (Figure 1.2) are evaluated as “the project area” or “the HDEPA” in this EA. Where necessary, the exploration area (as depicted on Figure 1.1) is discussed separately from the interconnect pipeline (Figure 1.2).

The area in which exploration wells would be drilled occupies 5,680 acres, 2,640 acres (46%) of which is federal surface. Up to 16 new wells would be drilled for this exploration project, seven on private land and nine on BLM land. Nine wells on private land have already been drilled and completed, so the exploration project would consist of a total of 25 wells. Twenty-three possible new well locations are shown on Figure 1.1, but no more than 16 additional new wells would be drilled. Seven contingency locations are identified to enable Williams flexibility on where to drill the exploration wells. If the exploration field is economically productive, Williams proposes to construct, operate, and maintain the necessary production facilities, including a natural gas interconnect pipeline to connect to an existing interstate pipeline (Figure 1.2). The exact pipeline alignment is not yet known, although it would be constructed within the 1-mi wide corridor shown on Figure 1.2. The entire 1-mi wide corridor encompassing an area of 12,471 acres (4,095 acres [33%] of which is federal surface) was analyzed in this EA (Figure 1.2). However, only a 90-ft construction right-of-way (ROW) and a 50-ft permanent (operations) ROW would be required for the pipeline.

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Figure 1.2 Proposed Pipeline Corridor and Landownership.

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The primary objectives for the exploration project would be:

- to determine the economically productive coal seams,
- to identify economical drilling and completion techniques,
- to determine if coal dewatering can be achieved,
- to assess produced water quality and quantity, and
- to identify the preferred depths/pressure windows for economic gas production.

## **1.1 PURPOSE AND NEED**

The purpose of the proposed project is to determine the commercial feasibility of producing federally owned CBM gas by a private company pursuant to their rights under existing oil and gas leases issued by the BLM and to prevent drainage of federal minerals by wells adjacent to nonfederal lands. National mineral leasing policies and the regulations by which they are enforced recognize the statutory right of lease holders to develop federal mineral resources to meet continuing national needs and economic demands so long as undue and unnecessary environmental degradation is not incurred. Privately owned gas would likely be developed regardless of development on federal lands.

Natural gas is an integral part of the U.S. energy future due to its availability, the presence of an existing market delivery infrastructure, and the environmental advantages of clean-burning natural gas as compared with other fuels. In addition, the development of abundant domestic reserves of natural gas would reduce the country's dependence on foreign sources of energy and maintain an adequate and stable supply of fuel for economic well-being, industrial production, power generation, and national security. The environmental advantages of natural gas combustion versus other conventional fuels are emphasized in the *Clean Air Act* amendments of 1990.

## **1.2 CONFORMANCE AND AUTHORIZING ACTIONS**

This EA is prepared in accordance with the *National Environmental Policy Act of 1969* (NEPA), as amended, and is in compliance with all applicable regulations and laws passed subsequently,

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including Council on Environmental Quality (CEQ) regulations (40 *Code of Federal Regulations* [C.F.R.] 1500-1508), U.S. Department of Interior (USDI) requirements (*Department Manual 516, Environmental Quality* [USDI 1980]), guidelines listed in the BLM *NEPA Handbook, H-1790-1* (BLM 1988a), and *Guidelines for Assessing and Documenting Cumulative Impacts* (BLM 1994). This EA assesses the environmental impacts of the Proposed Action (Section 2.1) and No Action Alternative (Section 2.2) and serves to guide the decision-making process.

The Great Divide Resource Area Record of Decision (ROD) and approved Resource Management Plan (RMP) (BLM 1987, 1988b, 1990a) directs the management of BLM-administered lands within the HDEPA. The objective for management of oil and gas resources is to provide for leasing, exploration, and development of oil and gas while protecting other resource values. Development of CBM within the HDEPA is in conformance with the RMP. If this exploration project proves viable and additional CBM development beyond that described herein is proposed, BLM would then require further NEPA analysis for these additional proposals.

The exploration area is completely within the MetFuel Hanna Basin CBM Project Area, for which an environmental impact statement (EIS) was prepared by the BLM's Rawlins Field Office (BLM 1993). The NEPA analysis for Williams's proposed exploration project is tiered to the MetFuel EIS and includes existing information and analysis where appropriate. Any information from the MetFuel EIS that is pertinent to this analysis is reproduced in its entirety in this document. BLM has updated information and conducted additional analysis where needed.

The proposed interconnect pipeline crosses the Simpson Ridge windpower project area, for which SeaWest Windpower Inc. holds a ROW to access and construct wind turbine generators and related facilities on BLM-administered lands. The windpower project was evaluated in the KENETECH/PacifiCorp Windpower Project EIS (BLM 1995a, 1995b), and the NEPA analysis presented in this EA is also tiered to the windpower EIS, as appropriate. Any information from the KENETECH/PacifiCorp EIS that is pertinent to this analysis is reproduced in its entirety in this document.

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The proposed project is also in conformance with the *State of Wyoming Land Use Plan* (Wyoming State Land Use Commission 1979) and the Carbon County Land Use Plan (Pederson Planning Consultants 1997, 1998) and would comply with all relevant federal, state, and local laws and regulations (Table 1.1).

A tiered approach to environmental review is used by the BLM in the leasing, exploration, and development of mineral resources. Initial environmental review occurs during BLM land use planning, during which appropriate lease stipulations for development are identified with public input. Accordingly, the federal minerals within the exploration area that have been leased to Williams carry a contractual commitment to allow for their development in accordance with the terms and conditions of the respective leases. During exploration, this EA, and site-specific EAs, as necessary, are prepared for each Application for Permit to Drill (APD) and each ROW application for access roads, water and gas gathering lines, pipelines, etc., as these applications are submitted, to ensure that significant impacts to surface and subsurface resource values do not occur. If exploration results in the discovery of economically recoverable quantities of natural gas such that development beyond that described in this EA is proposed, additional NEPA analysis would be required to assess the direct, indirect, and cumulative impacts to the environment that may result from such development.

The BLM has the authority to deny individual APDs and ROW applications; however, the lessee's right to drill and develop somewhere within the leasehold cannot be denied. Pursuant to the *Federal Land Policy and Management Act of 1976* (FLPMA), the BLM also has the authority and responsibility to protect the environment within federal oil and gas leases; therefore, restrictions may be imposed on lease terms. However, mitigation measures that would render a proposed operation uneconomical or unfeasible are not consistent with the lessee's rights and cannot be required unless they are included as a lease stipulation or are necessary to prevent unnecessary and undue degradation of public lands or resources (BLM Instruction Memorandum 92-67).

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Table 1.1 Federal, State, and County Permits, Approvals, and Authorizing Actions, Hanna Draw Coalbed Methane Exploration Project, Carbon County, Wyoming, 2001.<sup>1</sup>

Agency	Permit, Approval, or Action	Authority
Bureau of Land Management (BLM)	Permit to drill, deepen, or plug back on BLM-managed land (APD process)	<i>Mineral Leasing Act of 1920</i> , as amended (30 U.S.C. 181 et seq.); Requirements for Operating Rights Owners and Operators, as amended (43 C.F.R. 3162)
	ROW grants and temporary use permits for pipelines on BLM-managed land	<i>Mineral Leasing Act of 1920</i> , as amended (30 U.S.C. 185); Onshore Oil and Gas Unit Agreements: Unproven Areas, as amended (43 C.F.R. 3180)
	ROW grants for access roads on BLM-managed land	<i>Federal Land Policy and Management Act</i> (43 U.S.C. 1761-1771); Right-of-Way, Principles and Procedures, as amended (43 C.F.R. 2800)
	Authorization for flaring and venting of natural gas on BLM-managed land	<i>Mineral Leasing Act of 1920</i> , as amended (30 U.S.C. 181 et seq.); Requirements for Operating Rights Owners and Operators, as amended (43 C.F.R. 3162)
	Plugging and abandonment of a well on BLM-managed land	<i>Mineral Leasing Act of 1920</i> , as amended (30 U.S.C. 181 et seq.); Requirements for Operating Rights Owners and Operators, as amended (43 C.F.R. 3162)
	Antiquities and cultural resource permits on BLM-managed land	<i>Antiquities Act of 1906</i> , as amended (16 U.S.C. 431-433); <i>Archaeological Resources Protection Act of 1979</i> , as amended (16 U.S.C. Sections 470aa-470ll); <i>Preservation of American Antiquities</i> , as amended (43 C.F.R. 3)
Carbon County	Construction/use permits	County Code and Zoning Resolution
	Conditional use permits	County Code and Zoning Resolution
	Road use agreements/oversize trip permits	County Code
	County road crossing/access permits	County Code/Engineering Department
	Small wastewater permits	County Health Department
	Hazardous material recordation and storage	County Code
	Zone changes	Zoning Resolution
	Filing fees	County Code
	Noxious weed control	County Code

Table 1.1 (Continued)

Agency	Permit, Approval, or Action	Authority
U.S. Army Corps of Engineers (COE)	Section 404 permits and coordination regarding placement of dredged or fill material in area waters and adjacent wetlands	Section 404 of the <i>Clean Water Act of 1972</i> , as amended (33 U.S.C. 1344); EPA-administered Permit Programs: The National Pollutant Discharge Elimination System (NPDES), as amended (40 C.F.R. 122); State Program Requirements (40 C.F.R. 123); Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Filled Material, as amended (40 C.F.R. 230)
U.S. Fish and Wildlife Service (USFWS)	Coordination, consultation and impact review on federally listed threatened and endangered (T&E) species	<i>Fish and Wildlife Coordination Act</i> (16 U.S.C. 661-666c); Section 7 of the <i>Endangered Species Act of 1973</i> , as amended (16 U.S.C. 1536); <i>Bald Eagle Protection Act</i> (16 U.S.C. 668-668dd)
	Migratory bird impact coordination	<i>Migratory Bird Treaty Act</i> (16 U.S.C. 704)
U.S. Department of Transportation	Control pipeline maintenance and operation	Transportation of Natural and Other Gas by Pipeline; Annual Reports, Incident Reports, and Safety Related Condition Reports, as amended (49 C.F.R. 191); Transportation of Natural and Other Gas by Pipeline: Minimum Safety Standards, as amended (49 C.F.R. 192)
Wyoming Department of Environmental Quality - Water Quality Division (WDEQ-WQD)	Permits to construct settling ponds and waste water systems, including ground water injection and disposal wells	<i>Wyoming Environmental Quality Act</i> , Article 3, Water Quality, as amended (W.S. 35-11-301 through 35-11-311)
	Regulate disposal of drilling fluids from abandoned reserve pits	<i>Wyoming Environmental Quality Act</i> , Article 3, Water Quality, as amended (W.S. 35-11-301 through 35-11-311)
	NPDES permits for discharging produced water and storm water runoff	WDEQ-WQD Rules and Regulations, Chapter 18; <i>Wyoming Environmental Quality Act</i> , Article 3, Water Quality, as amended (W.S. 35-11-301 through 35-11-311); Section 405 of the <i>Federal Water Pollution Control Act (Clean Water Act)</i> (codified at 33 U.S.C. 1345); EPA-administered Permit Programs: NPDES, as amended (40 C.F.R. 122); State Program Requirements (40 C.F.R. 123); EPA Water Program Procedures for Decision-making, as amended (40 C.F.R. 124)
	Administrative approval for discharge of hydrostatic test water	<i>Wyoming Environmental Quality Act</i> , Article 3, Water Quality, as amended (W.S. 35-11-301 through 35-11-311)
Wyoming Department of Environmental Quality - Air Quality Division (WDEQ-AQD)	Permits to construct and permits to operate	<i>Clean Air Act</i> , as amended (42 U.S.C. 7401 et seq.); <i>Wyoming Environmental Quality Act</i> , Article 2, Air Quality, as amended (W.S. 35-11-201 through 35-11-212)
Wyoming Department of Environmental Quality - Land Quality Division (WDEQ-LQD)	Mine permits, impoundments, and drill hole plugging on state lands	<i>Wyoming Environmental Quality Act</i> , Article 4, Land Quality, as amended (W.S. 35-11-401 through 35-11-437)



Table 1.1 (Continued)

Agency	Permit, Approval, or Action	Authority
Wyoming Department of Environmental Quality - Solid Waste Division (WDEQ-SWD)	Construction fill permits and industrial waste facility permits for solid waste disposal during construction and operations	<i>Wyoming Environmental Quality Act</i> , Article 5, Solid Waste Management, as amended (W.S. 35-11-501 through 35-11-520)
Wyoming Department of Transportation (WDOT)	Permits for oversize, overlength, and overweight loads	Chapters 17 and 20 of the Wyoming Highway Department Rules and Regulations
	Access permits to state highways	Chapter 13 of the Wyoming Highway Department Rules and Regulations
Wyoming Oil and Gas Conservation Commission (WOGCC)/Wyoming Board of Land Commissioners/Land and Farm Loan Office	Approval of oil and gas leases, ROWs for long-term or permanent off-lease/off-unit roads and pipelines, temporary use permits, and developments on state lands	Public Utilities, W.S. 37-1-101 et seq.
WOGCC	Permit to drill, deepen, or plug back (APD process)	WOGCC Regulations, Chapter 3, Operational and Drilling Rules, Section 2 Location of Wells
	Permit to use earthen pit (reserve pits)	WOGCC Regulations, Chapter 4, Environmental Rules, Including Underground Injection Control Program Rules for Enhanced Recovery and Disposal Projects, Section 1, Pollution and Surface Damage (Forms 14A and 14B)
	Authorization for flaring or venting of gas	WOGCC Regulations, Chapter 3, Operational and Drilling Rules, Section 45 Authorization for Flaring or Venting of Gas
	Permit for Class II underground injection wells	Underground Injection Control Program: Criteria and Standards, as amended (40 C.F.R. 146); State Underground Injection Control Programs, State-administered program - Class II Wells, as amended (40 C.F.R. 147.2551)
	Well plugging and abandonment	WOGCC Regulations, Chapter 3, Section 14, Reporting (Form 4); Section 15, Plugging of Wells, Stratigraphic Tests, Core, or Other Exploratory Holes (Form 4)
	Change in depletion plans	<i>Wyoming Oil and Gas Act</i> , as amended (W.S. 30-5-110)
Wyoming State Engineer's Office (WSEO)	Permits to appropriate ground water (use, storage, wells, dewatering)	W.S. 41-3-901 through 41-3-938, as amended (Form U.W. 5)
Wyoming State Historic Preservation Office (SHPO)	Cultural resource protection, programmatic agreements, consultation	Section 106 of <i>National Historic Preservation Act of 1966</i> , as amended (16 U.S.C. 470 et seq.) and Advisory Council Regulations on Protection of Historic and Cultural Properties, as amended (36 C.F.R. 800)

<sup>1</sup> This list is intended to provide an overview of the key regulatory requirements that would govern project implementation. Additional approvals, permits, and authorizing actions may be necessary.

All mineral actions would comply with established goals, objectives, and resource restrictions (mitigations) required to protect natural resource values in the Rawlins Field Office planning area. Resources, impacts, and associated mitigation and monitoring measures on federal, state, and private lands within the HDEPA are addressed in this EA.

Use authorizations for roads, gas and water gathering lines, and well site facilities would be processed through the BLM APD and sundry notice permitting process as long as the facilities remain on-lease and are owned and operated by Williams. Any facility located off-lease, including a 19.5-mi long interconnect pipeline, would require an individual ROW authorization.

Some leases within the exploration area include special stipulations regarding occupancy in addition to standard lease terms. These special stipulations are designed to protect surface resources such as soils, water, and wildlife by restricting periods of activity and areas of disturbance. Application of these lease stipulations will be handled on a case-by-case basis for each APD submitted to the BLM.

### **1.3 LAND AND RESOURCE MANAGEMENT ISSUES AND CONCERNS**

A number of issues was identified during scoping for this project by the BLM and other entities. A scoping notice was sent to approximately 350 government agencies, news outlets, organizations, and individuals in March 2001 to solicit comments on the proposed project. In addition, an open house was held at the Town of Hanna Administrative Office on April 17, 2001, to answer questions regarding the proposed project. Twenty-one written comments were received--eight from individuals, five from environmental organizations, one from a petroleum organization, five from state agencies, and two from federal agencies. Issues identified by respondents and/or by the BLM are listed in Appendix A.

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